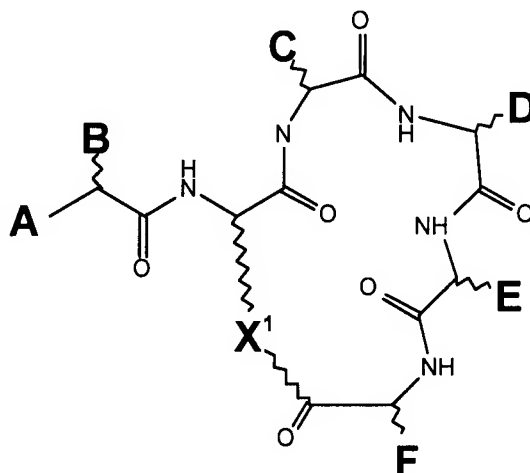


## 2. AMENDMENTS TO THE CLAIMS (LISTING OF CLAIMS):

*This listing of claims will replace all prior versions and listings of claims in the application.*

1. (Currently Amended) A method of treatment of inflammatory bowel disease, comprising the step of administering an effective amount of an inhibitor of a C5a receptor to a subject in need of such treatment, in which the inhibitor is a compound which is an antagonist of a C5a receptor, ~~has substantially no agonist activity,~~ and is a cyclic peptide or peptidomimetic compound of formula I:



where A is H, alkyl, aryl, NH<sub>2</sub>, NH-alkyl, N(alkyl)<sub>2</sub>, NH-aryl, NH-acyl, NH-benzoyl, NHSO<sub>3</sub>, NHSO<sub>2</sub>-alkyl, NHSO<sub>2</sub>-aryl, OH, O-alkyl, or O-aryl;

**B** is an alkyl, aryl, phenyl, benzyl, naphthyl or indole group, or the side chain of a D- or L-amino acid, but is not the side chain of glycine, D-phenylalanine, L-homophenylalanine, L-tryptophan, L-homotryptophan, L-tyrosine, or L-homotyrosine;

**C** is the side chain of a D-, L- or homo-amino acid, but is not the side chain of isoleucine, phenylalanine, or cyclohexylalanine;

**D** is the side chain of a neutral D-amino acid, but is not the side chain of glycine or D-alanine, a bulky planar side chain, or a bulky charged side chain;

**E** is a bulky substituent, but is not the side chain of D-tryptophan, L-N-methyltryptophan, L-homophenylalanine, L-2-naphthyl L-tetrahydroisoquinoline, L-cyclohexylalanine, D-leucine, L-fluorenylalanine, or L-histidine;

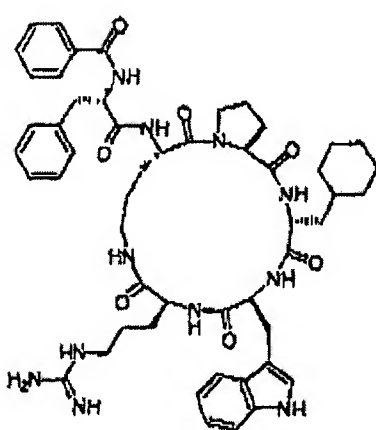
**F** is the side chain of L-arginine, L-homoarginine, L-citrulline, or L-canavanine, ~~or a bioisostere thereof~~; and

**X** is  $-(CH_2)_nNH-$  or  $(CH_2)_nS-$ , where  $n$  is an integer of from 1 to 4;  $-(CH_2)_2O-$ ;  $-(CH_2)_3O-$ ;  $-(CH_2)_3-$ ;  $-(CH_2)_4-$ ;  $-CH_2COCHRNH-$ ; or  $-CH_2CHCOCHRNH-$ , where  $R$  is the side chain of any common or uncommon amino acid.

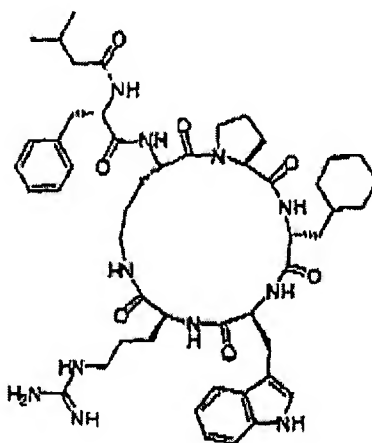
2. (Previously Presented) The method of claim 1, in which  $n$  is 2 or 3.
3. (Previously Presented) The method of claim 1, in which **A** is an acetamide group, an aminomethyl group, or a substituted or unsubstituted sulphonamide group.
4. (Previously Presented) The method of claim 1, in which **A** is a substituted sulphonamide, and the substituent is an alkyl chain of 1 to 6 carbon atoms, or a phenyl or toluyl group.
5. (Previously Presented) The method of claim 4, in which the substituent is an alkyl chain of 1 to 4 carbon atoms.

6. (Previously Presented) The method of claim 1, in which **B** is the side chain of L-phenylalanine or L-phenylglycine.
7. (Previously Presented) The method of claim 1, in which **C** is the side chain of glycine, alanine, leucine, valine, proline, hydroxyproline, or thioproline.
8. (Previously Presented) The method of claim 1, in which **D** is the side chain of D-Leucine, D-homoleucine, D-cyclohexylalanine, D-homocyclohexylalanine, D-valine, D-norleucine, D-homo-norleucine, D-phenylalanine, D-tetrahydroisoquinoline, D-glutamine, D-glutamate, or D-tyrosine.
9. (Previously Presented) The method of claim 1, in which **E** is the side chain of an amino acid selected from the group consisting of L-phenylalanine, L-tryptophan and L-homotryptophan, or is L-1-naphthyl or L-3-benzothieryl alanine.
10. (Canceled)
11. (Previously Presented) The method of claim 1, wherein said inhibitor has potent antagonist activity at sub-micromolar concentrations.
12. (Previously Presented) The method of claim 1, wherein said compound has a receptor affinity  $IC_{50} < 25\mu M$ , and an antagonist potency  $IC_{50} < 1\mu M$ .

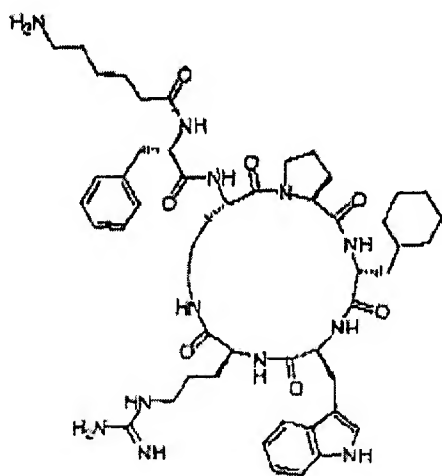
13. (Currently Amended) The method of claim 1, wherein said compound is selected from the group consisting of: AcF-[OPdChaWR] (PMX53), ~~compounds 1 to 6, 10 to 15, 17, 19, 20, 22, 25, 26, 28, 30, 31, 33 to 37, 39 to 45, 47 to 50, 52 to 58 and 60 to 70~~ described in PCT/AU02/01427.



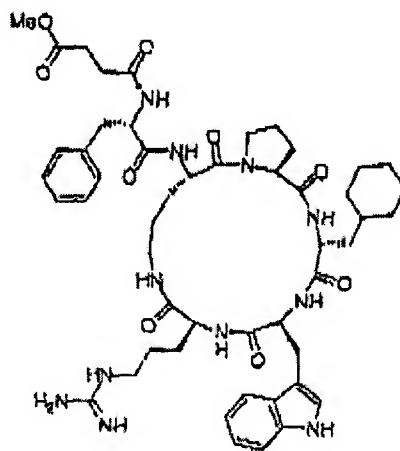
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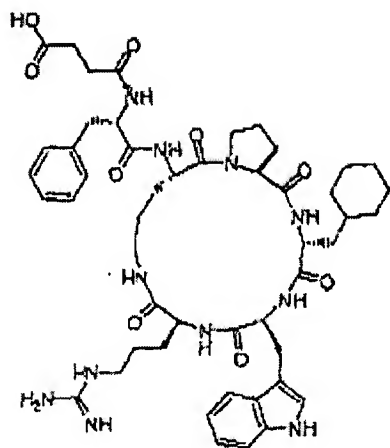
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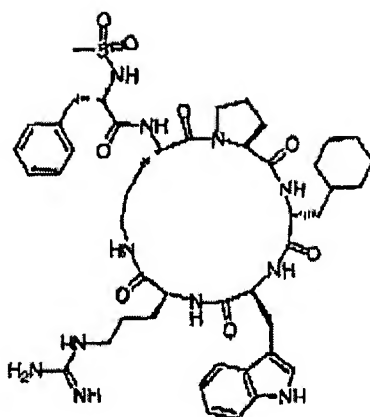
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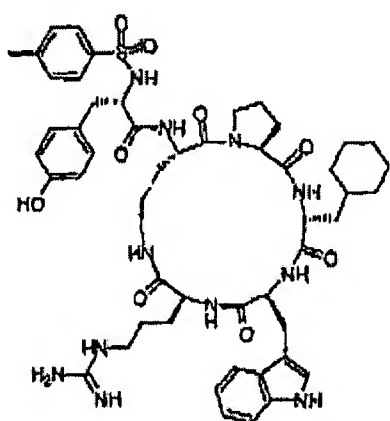
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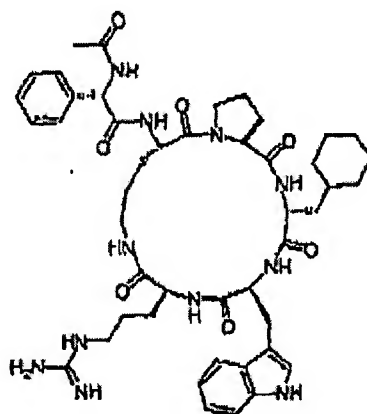
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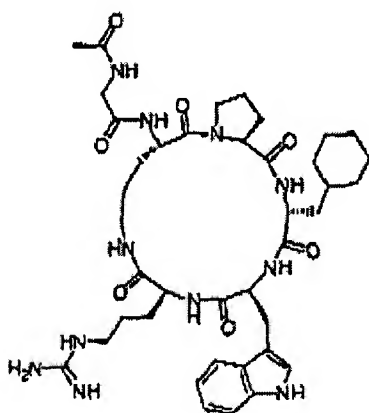
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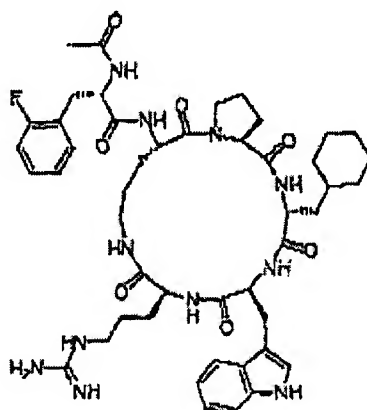
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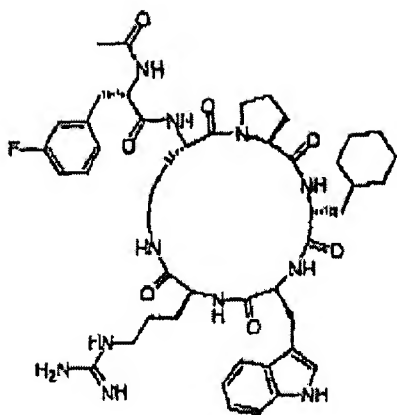
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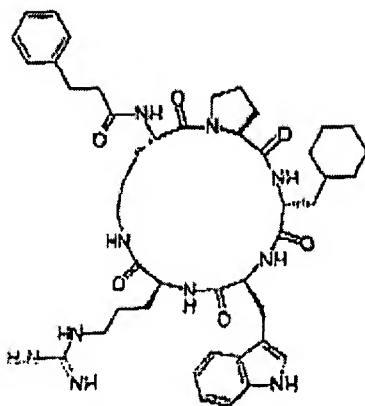
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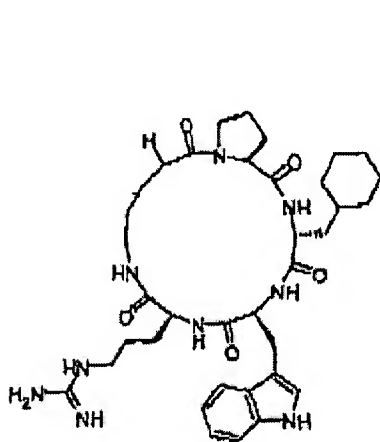
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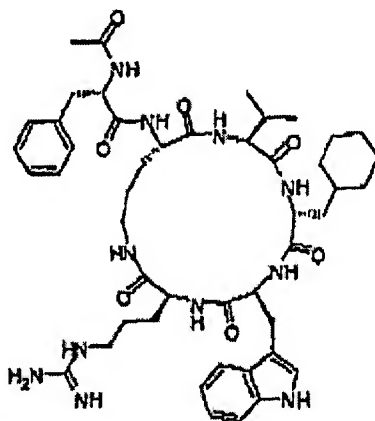
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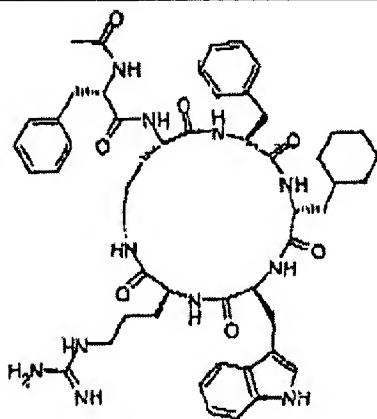
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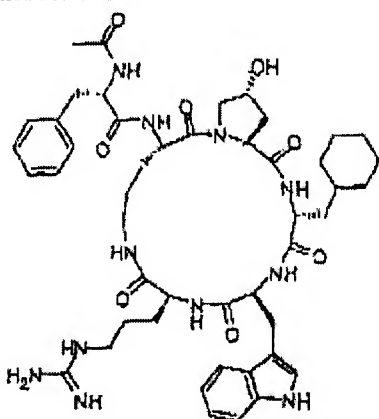
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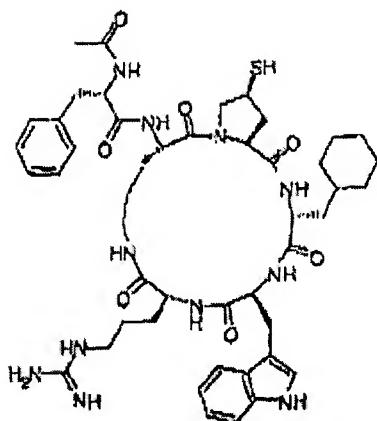
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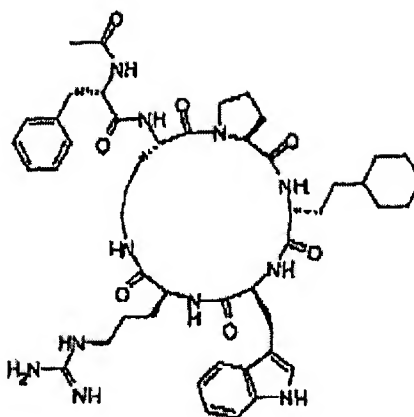
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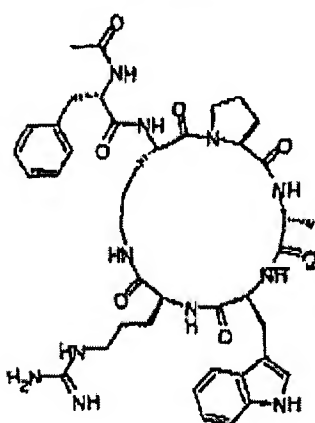
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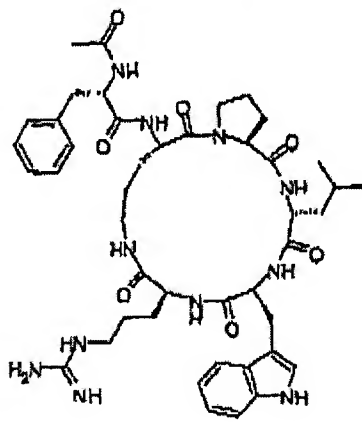
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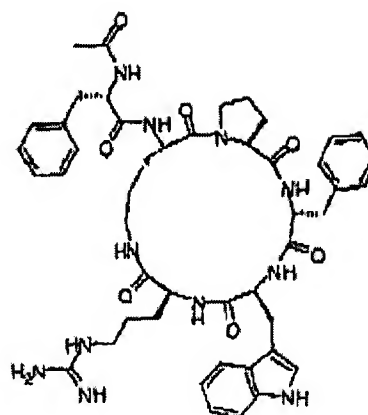
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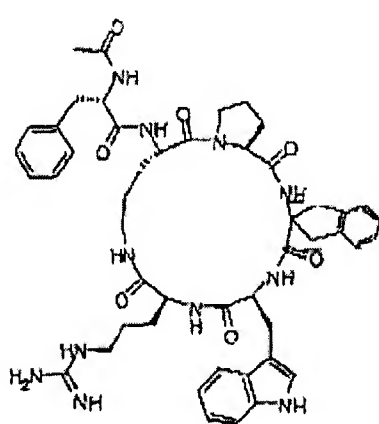
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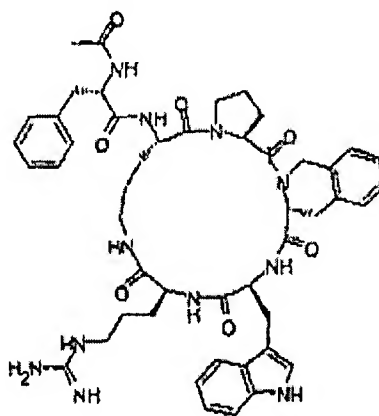
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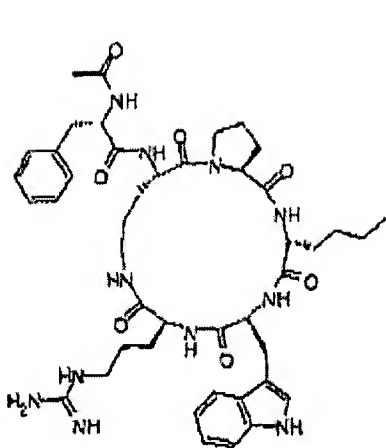
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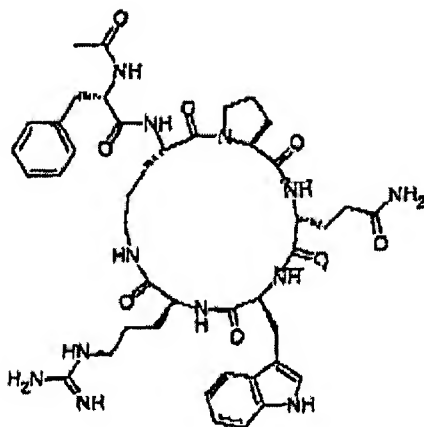
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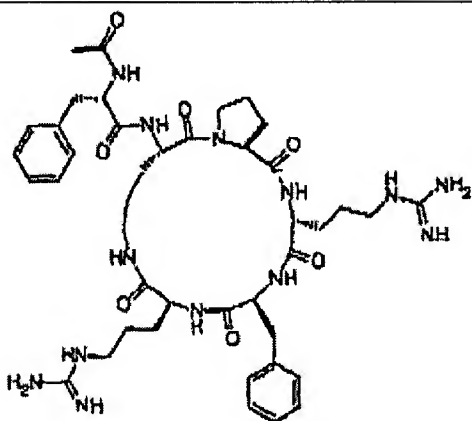
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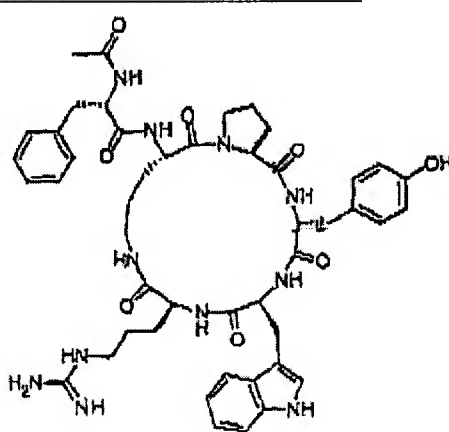
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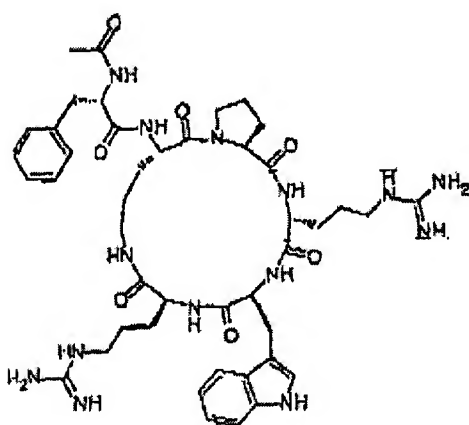
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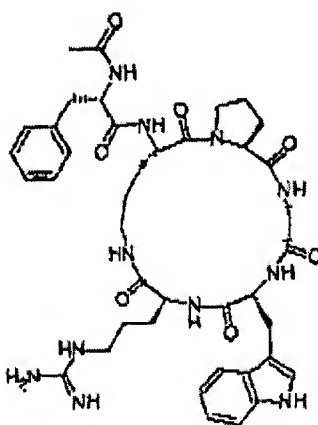
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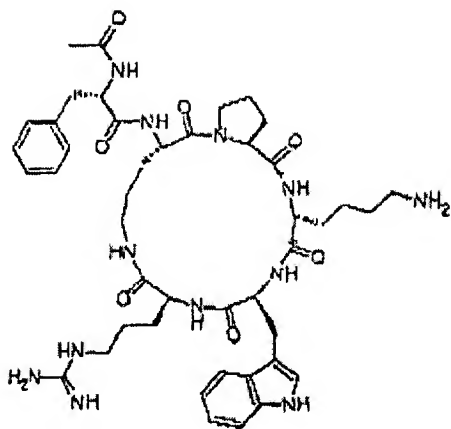


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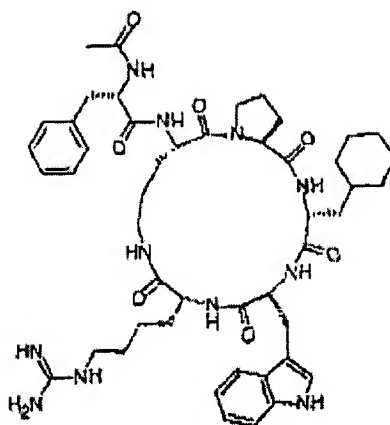


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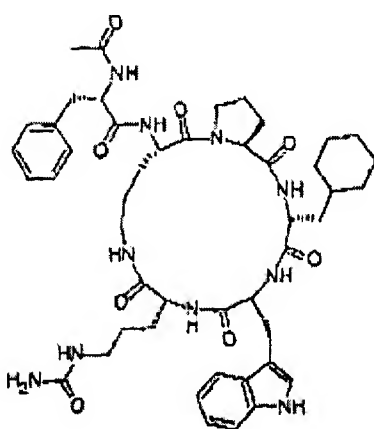




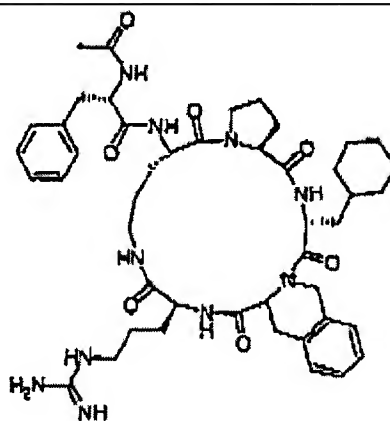
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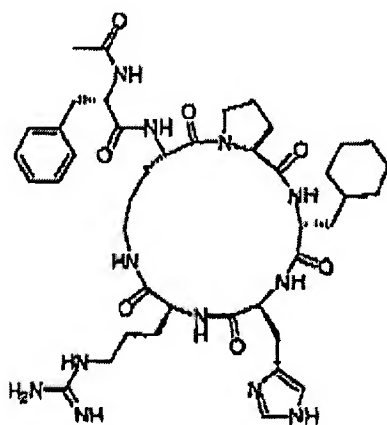
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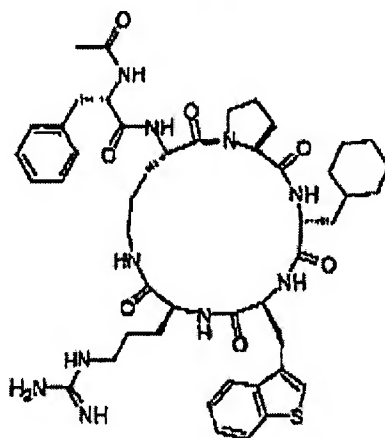
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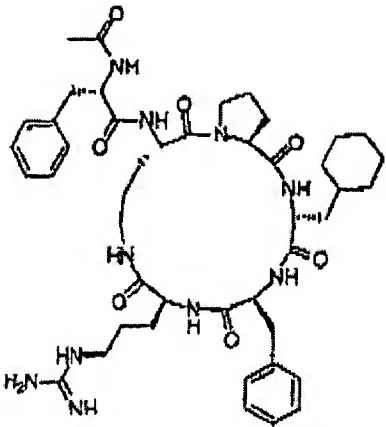
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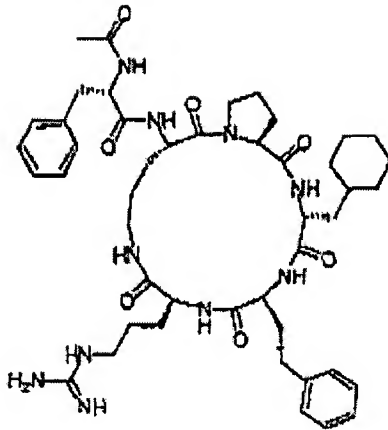
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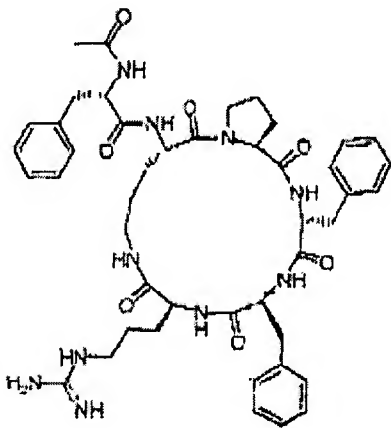
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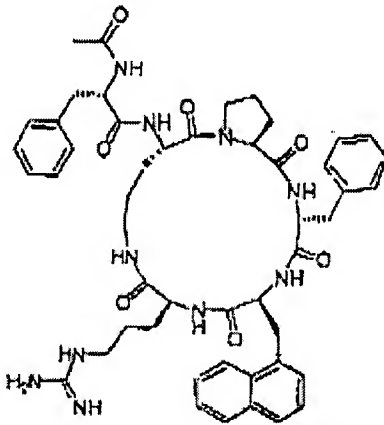
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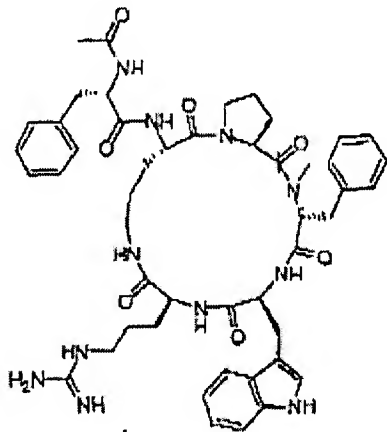


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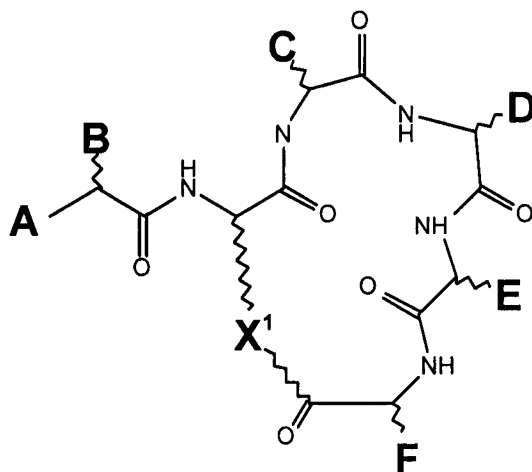
and



**FW**

14. (Currently Amended) The method of claim ~~[[13]]~~1, wherein said compound is AcF-[OPdChaWR] (PMX53) ~~PMX53 (compound 1), compound 33, compound 60 or compound 45 described in PCT/AU02/01427.~~
15. (Previously Presented) The method of claim 1, wherein said inhibitor is used in conjunction with one or more other agents for the treatment of inflammatory bowel disease.
16. (Previously Presented) The method of claim 15, wherein said other agent is infliximab or is an inhibitor of C3a.
- 17.-19. (Canceled)
20. (Previously Presented) The method of claim 1, wherein said inflammatory bowel disease is ulcerative colitis.
21. (Previously Presented) The method of claim 1, wherein said inflammatory bowel disease is Crohn's disease.
22. (Canceled)

23. (Previously Presented) The method of claim 1, wherein said inhibitor is administered in an enteric coated capsule or per-rectally.
24. (Currently Amended) The method of claim ~~[[14]]~~13, wherein said compound is PMX53 (AcF-[OPdChaWR]).
25. (New) A method of treating or ameliorating the symptoms of an inflammatory bowel disease in a mammal, said method comprising the step of administering to a mammal in need thereof, an amount of a compound of the formula (AcF-[OPdChaWR]) effective to treat or ameliorate the symptoms of said disease in said mammal.
26. (New) A method of ameliorating one or more symptoms of an inflammatory bowel disease in a mammal, said method comprising the step of administering to a mammal in need thereof, an amount of a C5a receptor antagonist compound effective to ameliorate said one or more symptoms of said inflammatory bowel disease in said mammal, wherein said compound comprises a cyclic peptide or peptidomimetic compound of formula I:



where **A** is H, alkyl, aryl, NH<sub>2</sub>, NH-alkyl, N(alkyl)<sub>2</sub>, NH-aryl, NH-acyl, NH-benzoyl, NHSO<sub>3</sub>, NHSO<sub>2</sub>-alkyl, NHSO<sub>2</sub>-aryl, OH, O-alkyl, or O-aryl;

**B** is an alkyl, aryl, phenyl, benzyl, naphthyl or indole group, or the side chain of a D- or L-amino acid, but is not the side chain of glycine, D-phenylalanine, L-homophenylalanine, L-tryptophan, L-homotryptophan, L-tyrosine, or L-homotyrosine;

**C** is the side chain of a D-, L- or homo-amino acid, but is not the side chain of isoleucine, phenylalanine, or cyclohexylalanine;

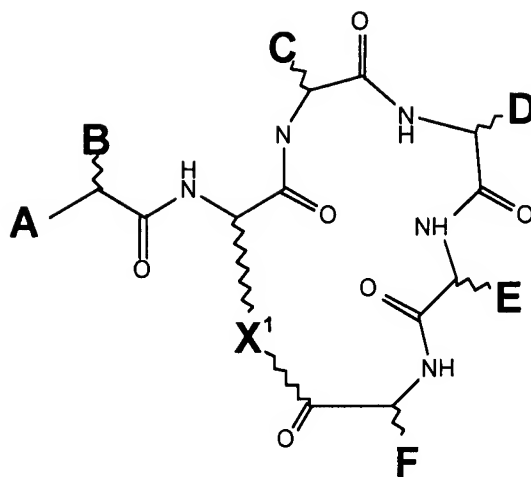
**D** is the side chain of a neutral D-amino acid, but is not the side chain of glycine or D-alanine, a bulky planar side chain, or a bulky charged side chain;

**E** is a bulky substituent, but is not the side chain of D-tryptophan, L-*N*-methyltryptophan, L-homophenylalanine, L-2-naphthyl L-tetrahydroisoquinoline, L-cyclohexylalanine, D-leucine, L-fluorenylalanine, or L-histidine;

**F** is the side chain of L-arginine, L-homoarginine, L-citrulline, or L-canavanine;  
and

**X** is -(CH<sub>2</sub>)<sub>n</sub>NH- or (CH<sub>2</sub>)<sub>n</sub>S-, where n is an integer of from 1 to 4; -(CH<sub>2</sub>)<sub>2</sub>O-; -(CH<sub>2</sub>)<sub>3</sub>O-; -(CH<sub>2</sub>)<sub>3</sub>-; -(CH<sub>2</sub>)<sub>4</sub>-; -CH<sub>2</sub>COCHRNH-; or -CH<sub>2</sub>CHCOCHRNH-, where R is the side chain of any common or uncommon amino acid.

27. (New) A method of treating an inflammatory bowel disease in a mammal, said method comprising the step of administering to a mammal in need thereof, an amount of a C5a receptor antagonist compound effective to treat said inflammatory bowel disease in said mammal, wherein said compound comprises a cyclic peptide or peptidomimetic compound of formula I:



where **A** is H, alkyl, aryl, NH<sub>2</sub>, NH-alkyl, N(alkyl)<sub>2</sub>, NH-aryl, NH-acyl, NH-benzoyl, NHSO<sub>3</sub>, NHSO<sub>2</sub>-alkyl, NHSO<sub>2</sub>-aryl, OH, O-alkyl, or O-aryl;

**B** is an alkyl, aryl, phenyl, benzyl, naphthyl or indole group, or the side chain of a D- or L-amino acid, but is not the side chain of glycine, D-phenylalanine, L-homophenylalanine, L-tryptophan, L-homotryptophan, L-tyrosine, or L-homotyrosine;

**C** is the side chain of a D-, L- or homo-amino acid, but is not the side chain of isoleucine, phenylalanine, or cyclohexylalanine;

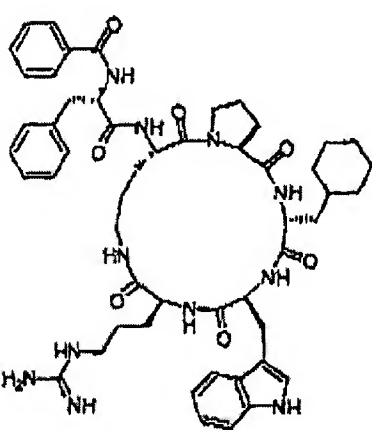
**D** is the side chain of a neutral D-amino acid, but is not the side chain of glycine or D-alanine, a bulky planar side chain, or a bulky charged side chain;

**E** is a bulky substituent, but is not the side chain of D-tryptophan, L-*N*-methyltryptophan, L-homophenylalanine, L-2-naphthyl L-tetrahydroisoquinoline, L-cyclohexylalanine, D-leucine, L-fluorenylalanine, or L-histidine;

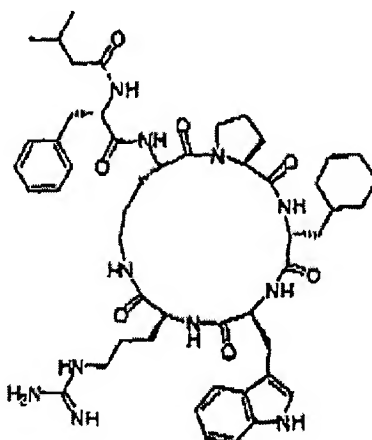
**F** is the side chain of L-arginine, L-homoarginine, L-citrulline, or L-canavanine;  
and

X is  $-(\text{CH}_2)_n\text{NH}-$  or  $(\text{CH}_2)_n\text{-S}-$ , where n is an integer of from 1 to 4;  $-(\text{CH}_2)_2\text{O}-$ ;  $-(\text{CH}_2)_3\text{O}-$ ;  $-(\text{CH}_2)_3-$ ;  $-(\text{CH}_2)_4-$ ;  $-\text{CH}_2\text{COCHRNH}-$ ; or  $-\text{CH}_2\text{CHCOCHRNH}-$ , where R is the side chain of any common or uncommon amino acid.

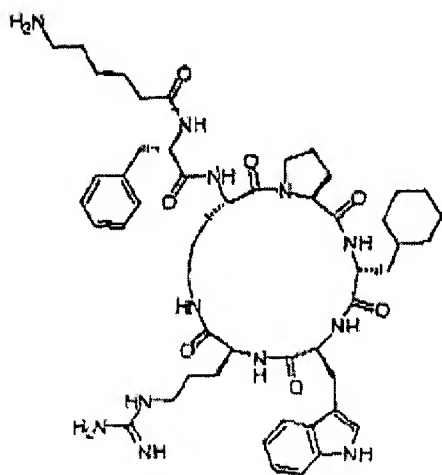
28. (New) The method of claim 26 or claim 27, wherein said compound is selected from the group consisting of: AcF-[OPdChaWR],



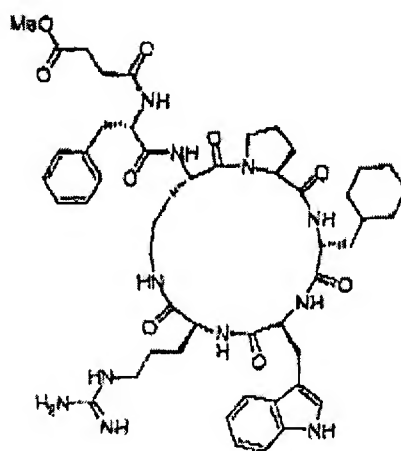
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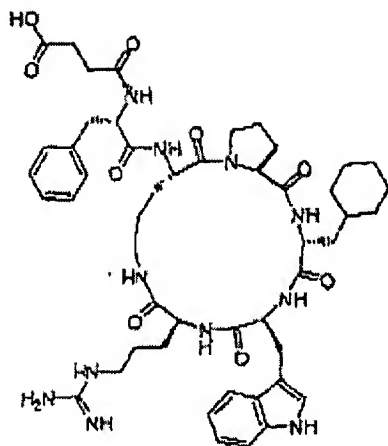
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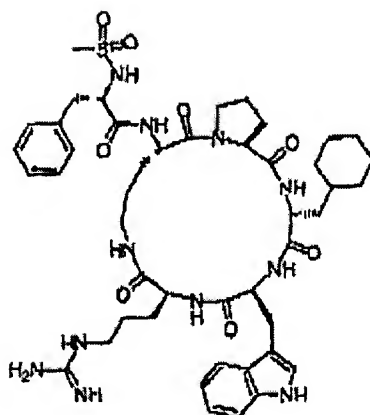
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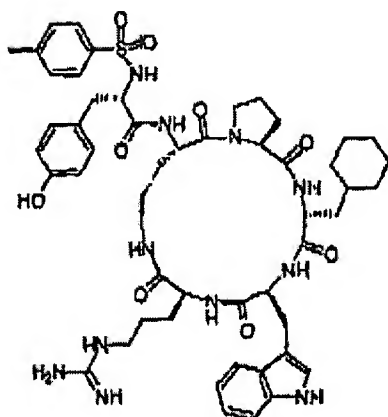
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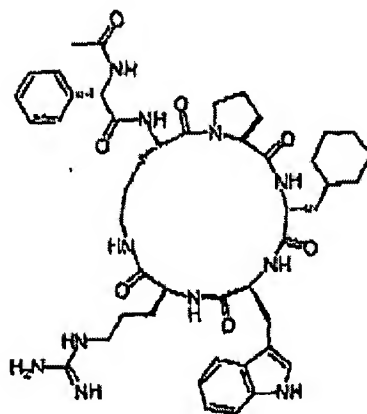
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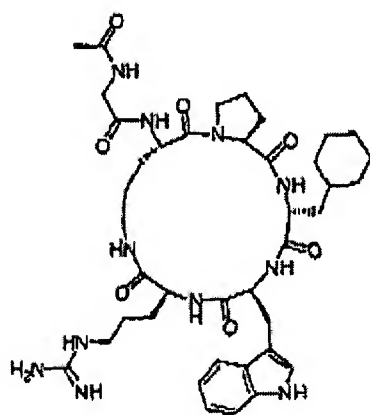
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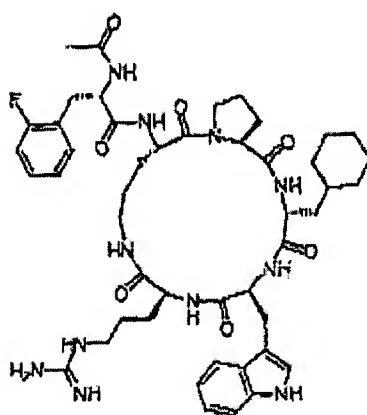
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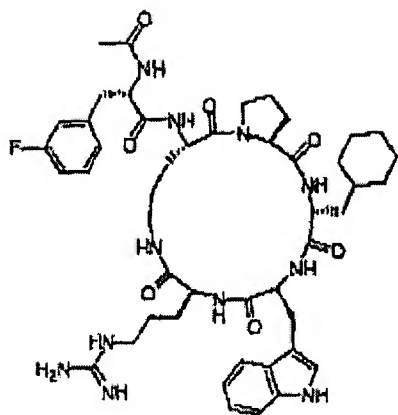


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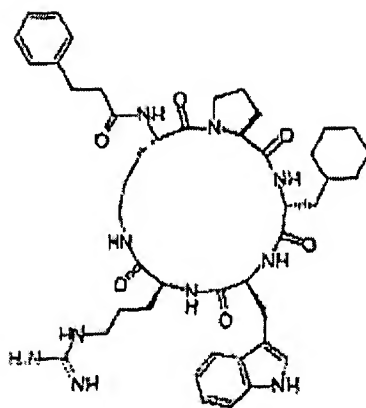


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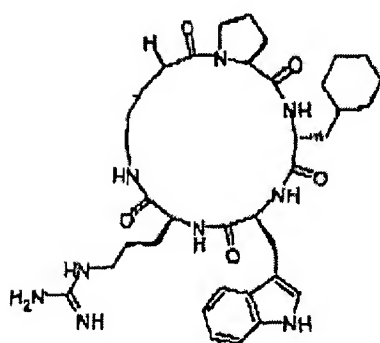




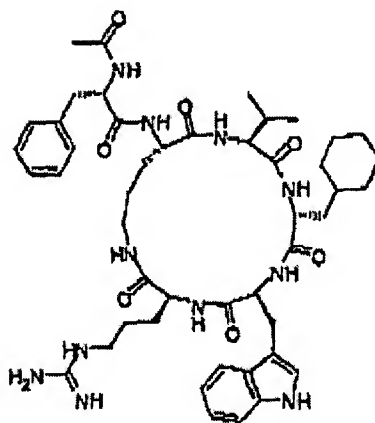
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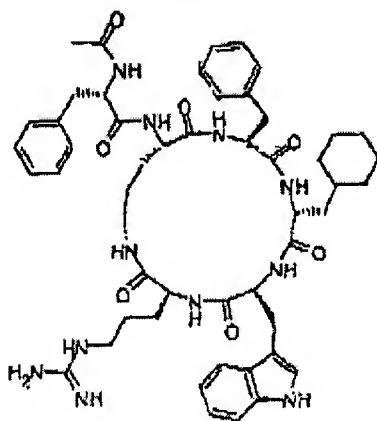
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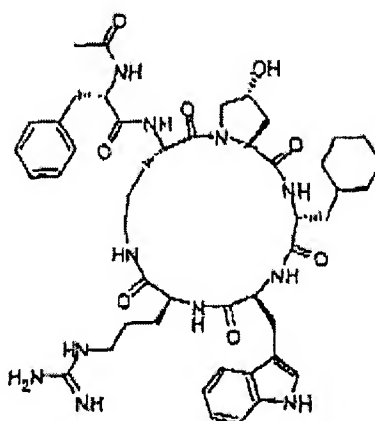
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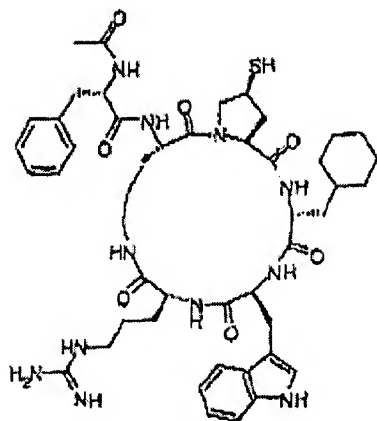
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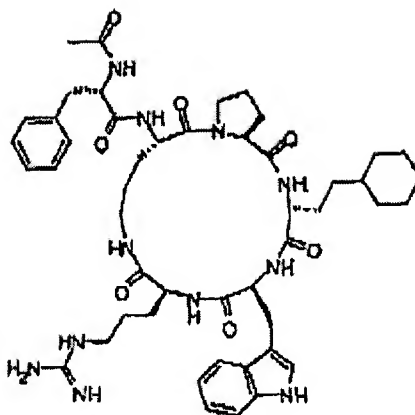
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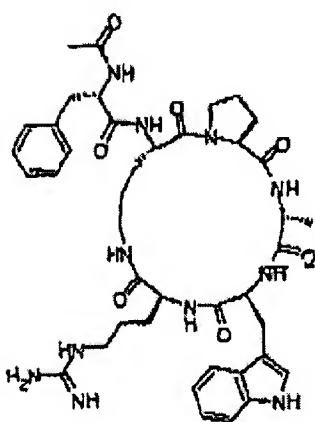
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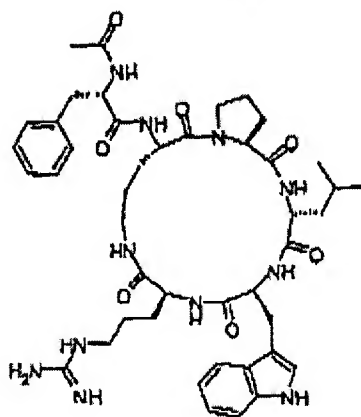
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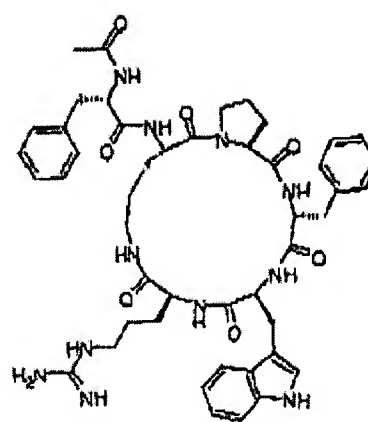
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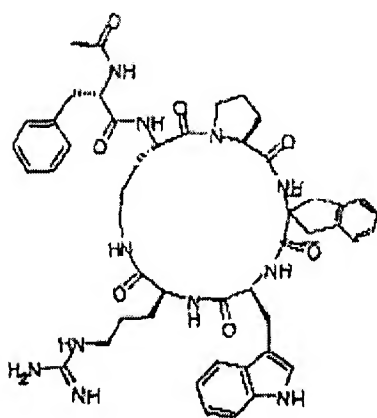
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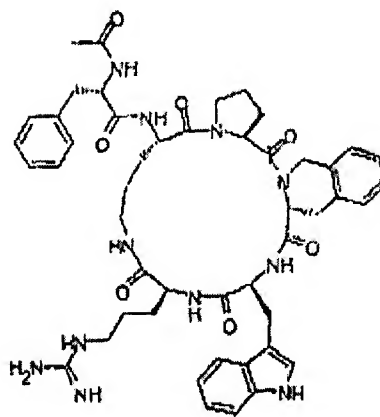
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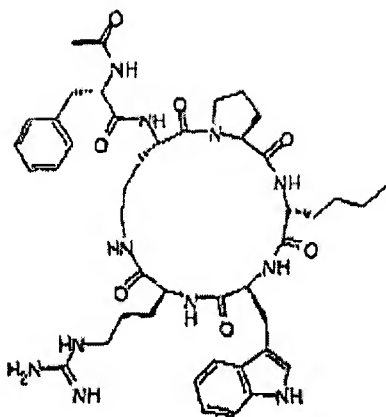
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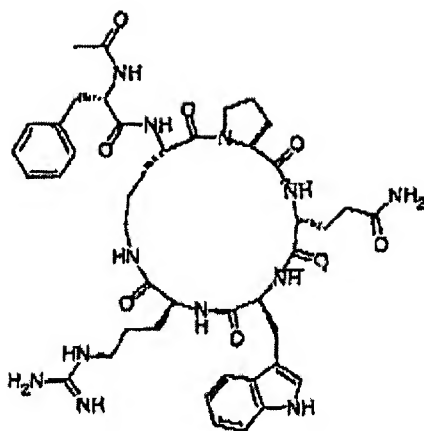
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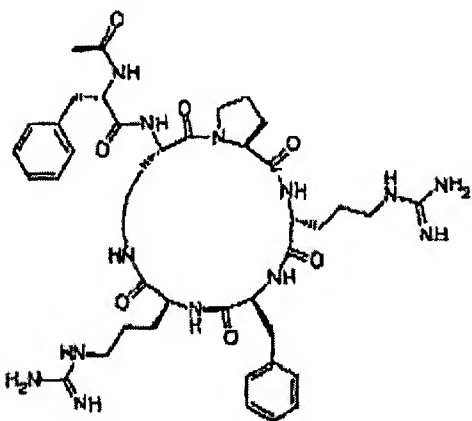
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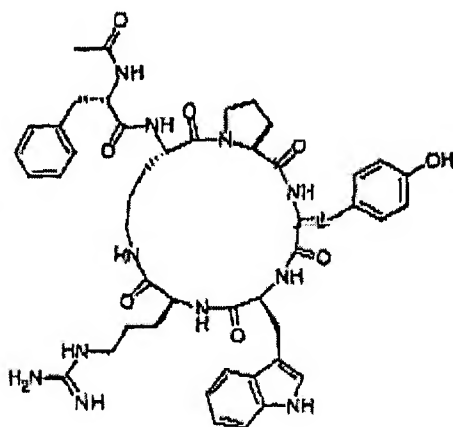
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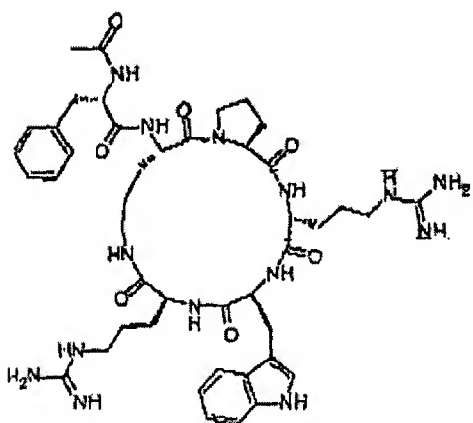
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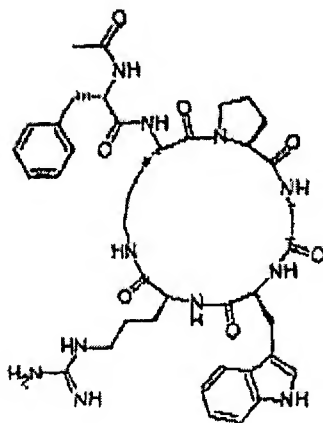
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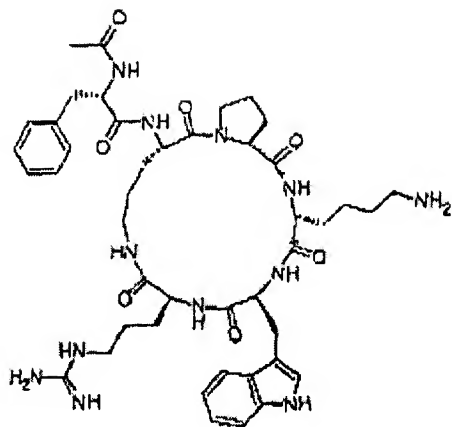
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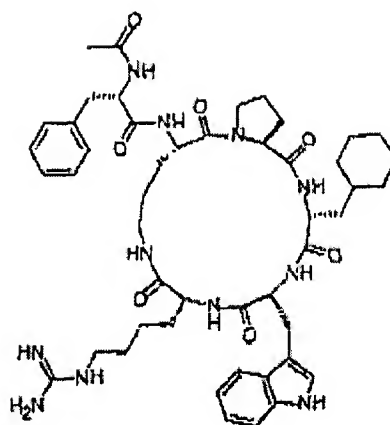
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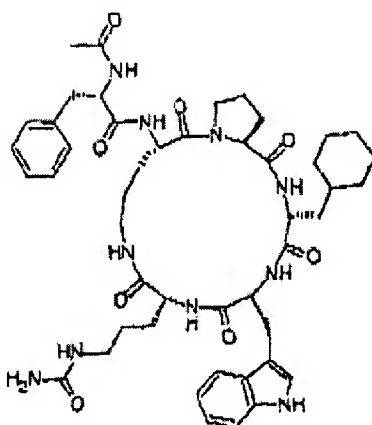
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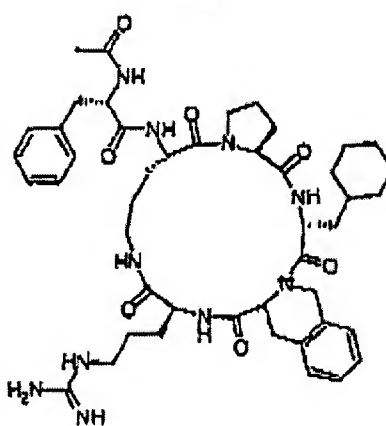
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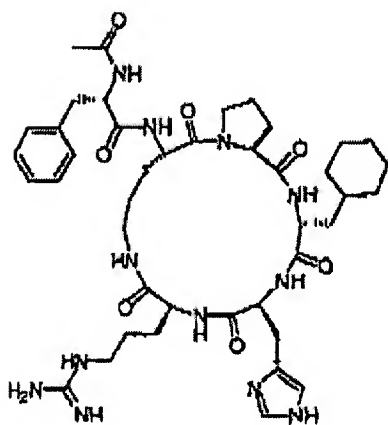
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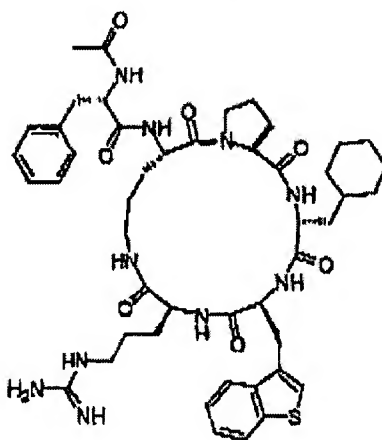
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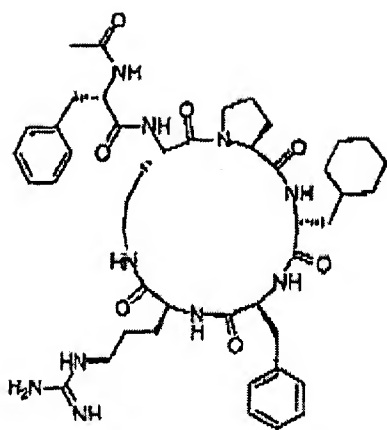
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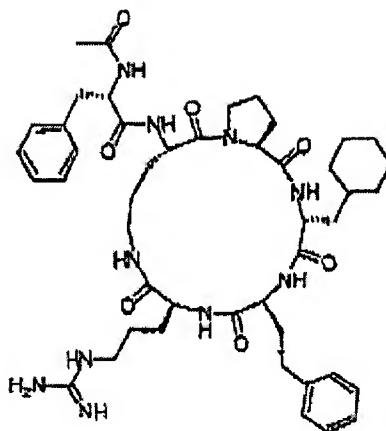
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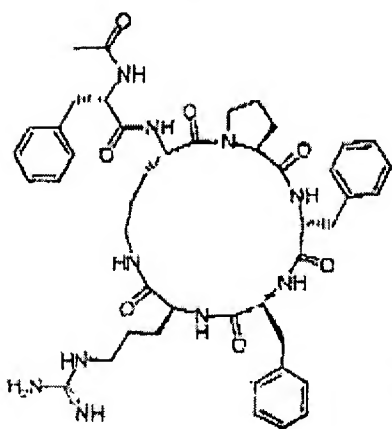
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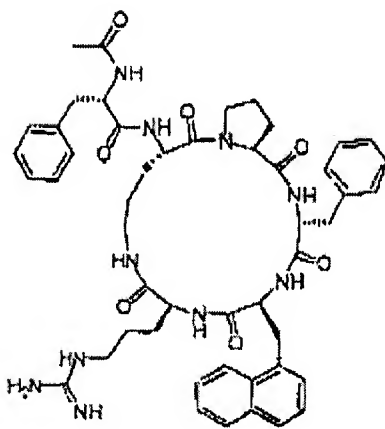
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61

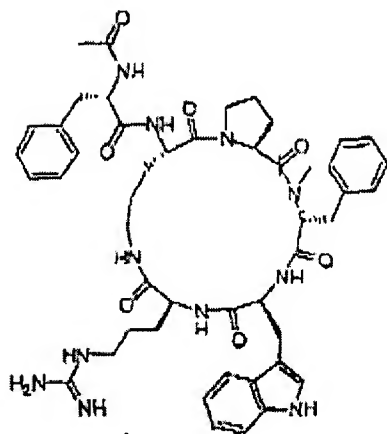


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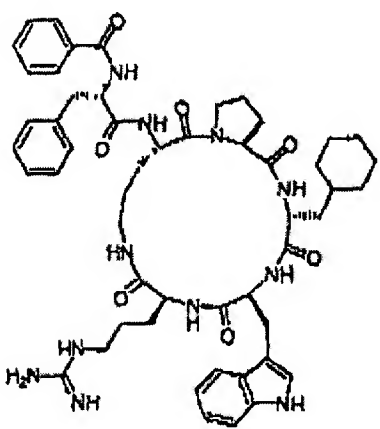
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and

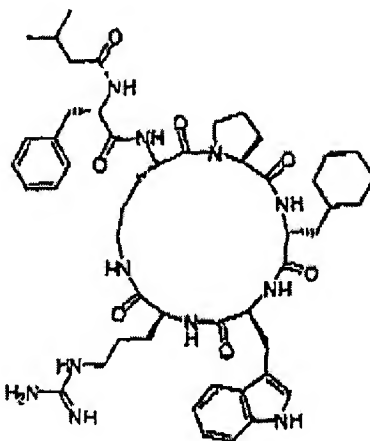


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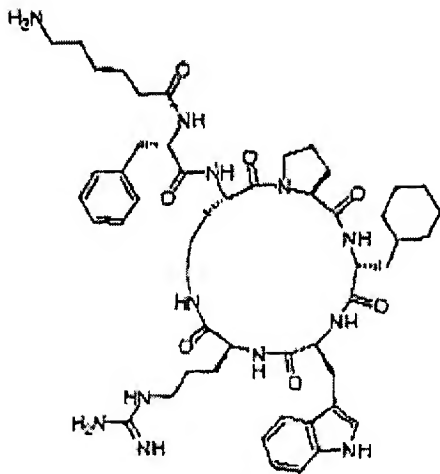
29. (New) A method of treating or ameliorating the symptoms of ulcerative colitis or Crohn's disease in a mammal, said method comprising the step of administering to a mammal in need thereof, an amount of a compound selected from the group consisting of (AcF-[OPdChaWR]),



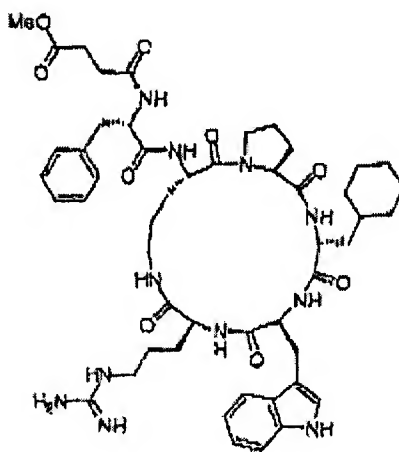
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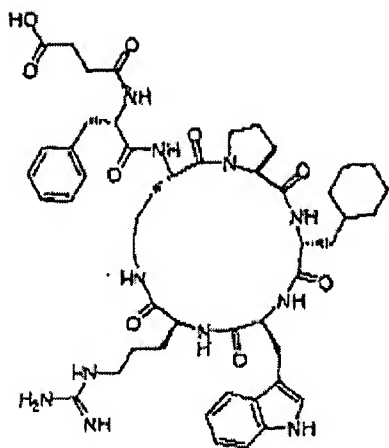
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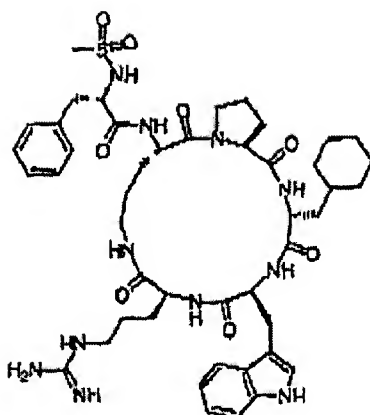
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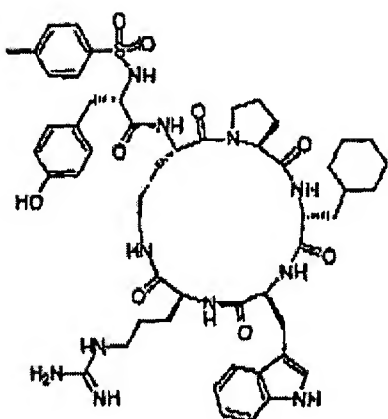
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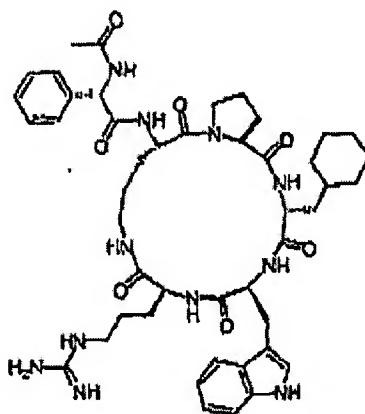
6



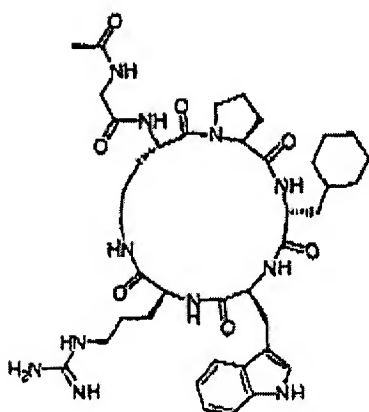
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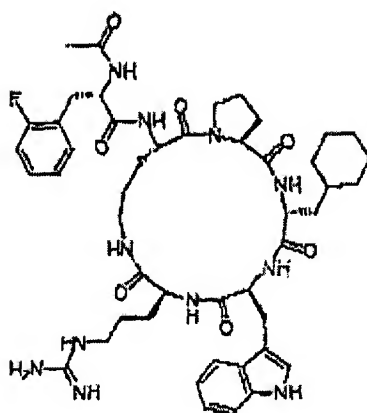
11



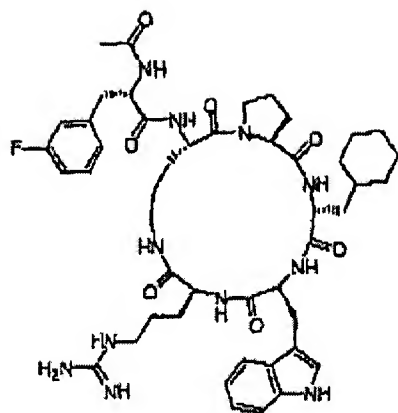
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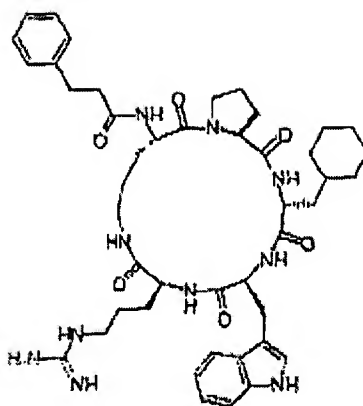
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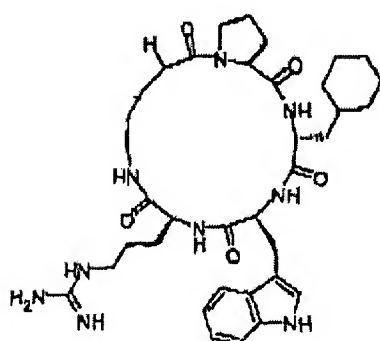
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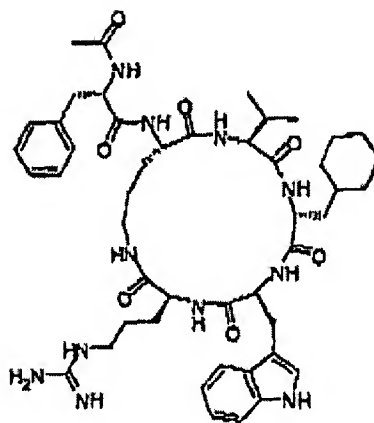
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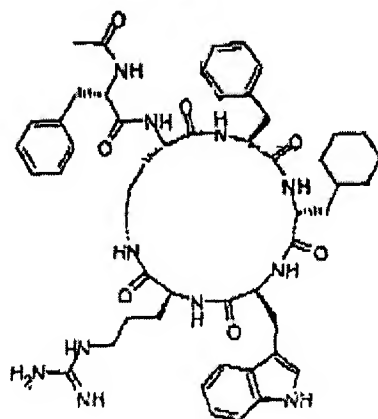
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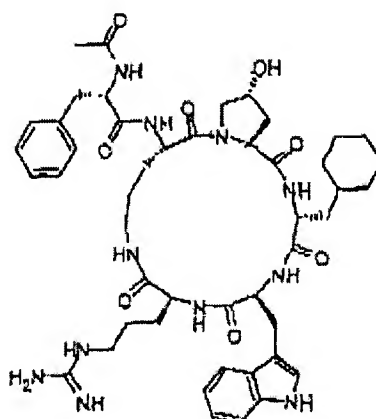
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20

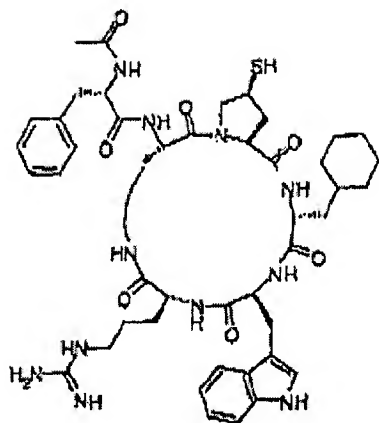


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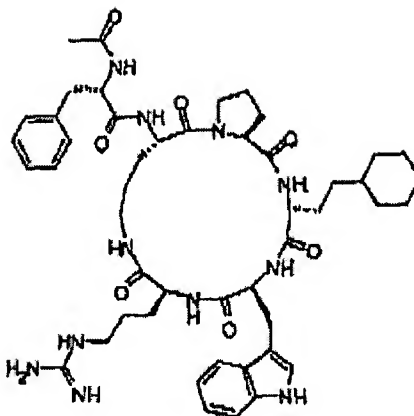


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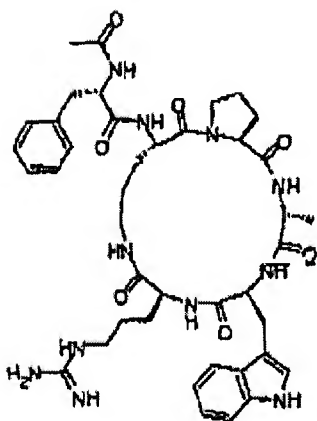




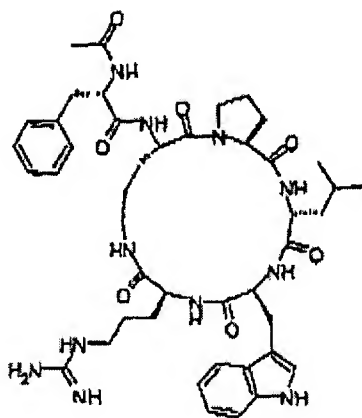
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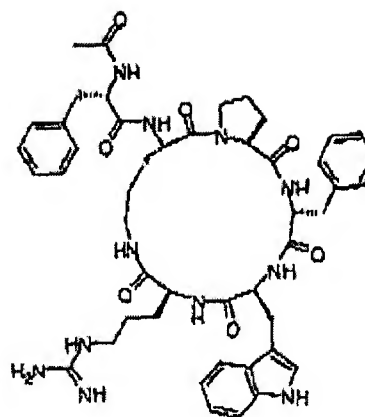
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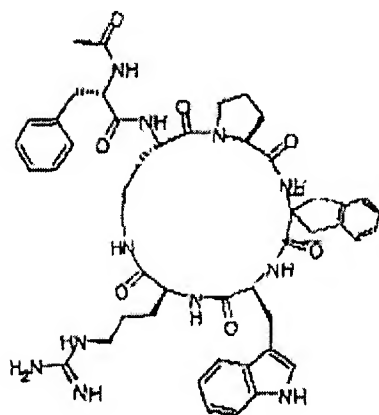
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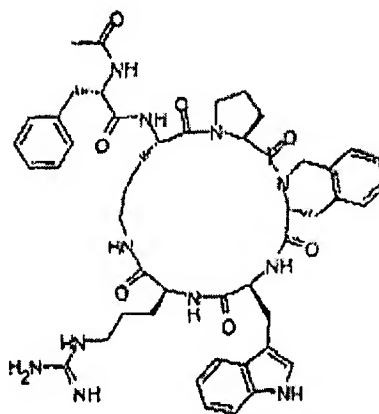
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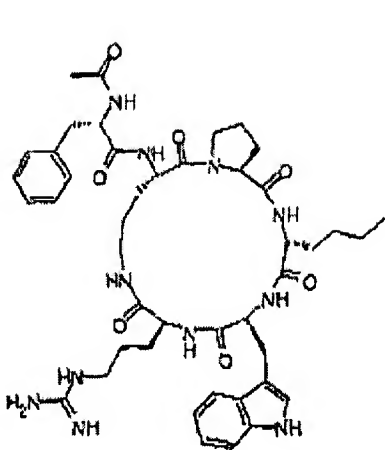
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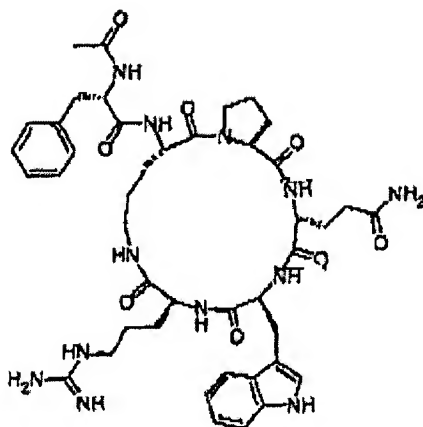
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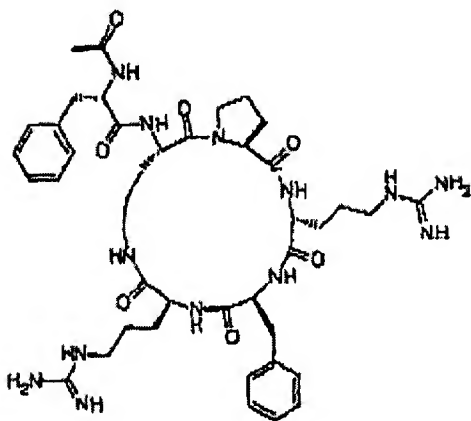
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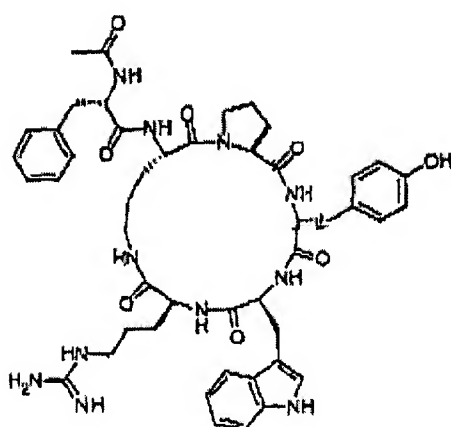
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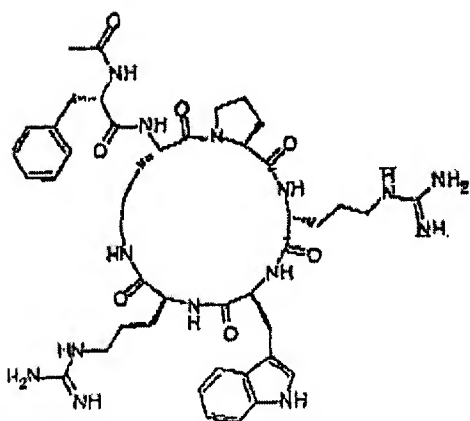
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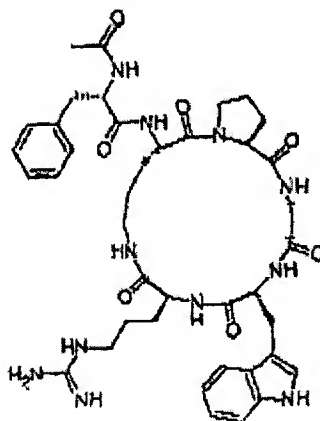
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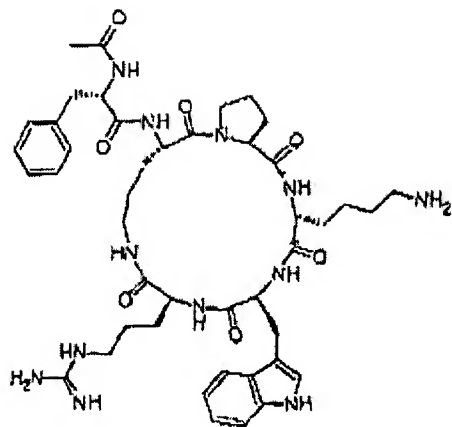
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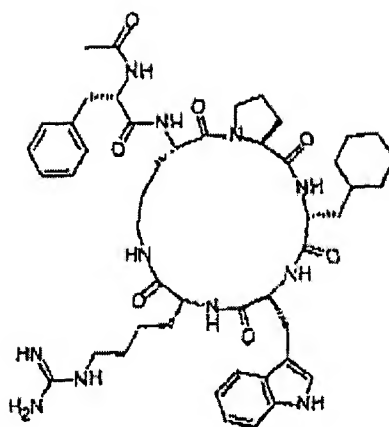
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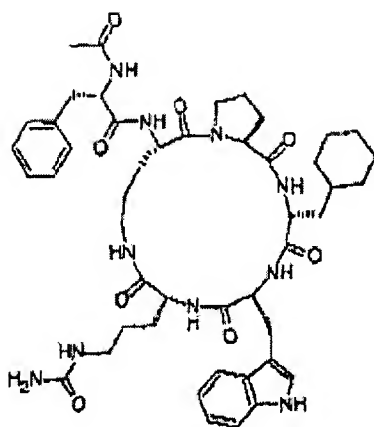
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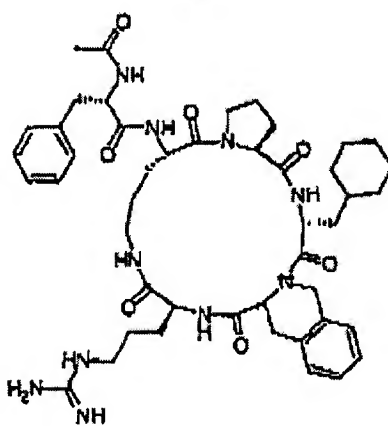
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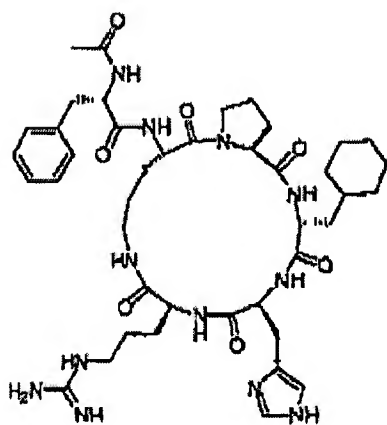
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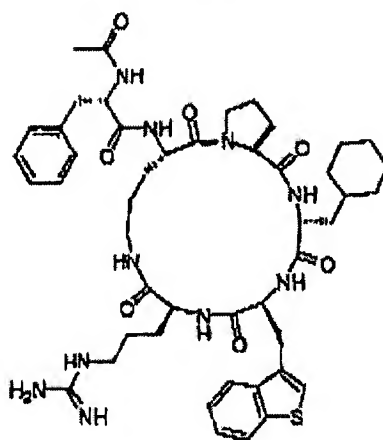
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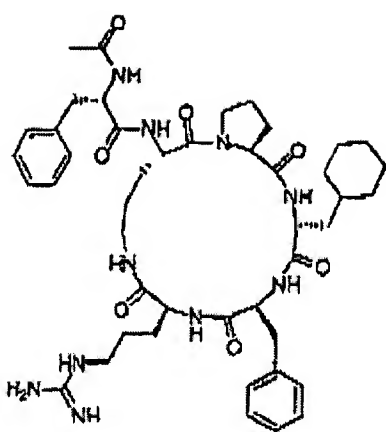
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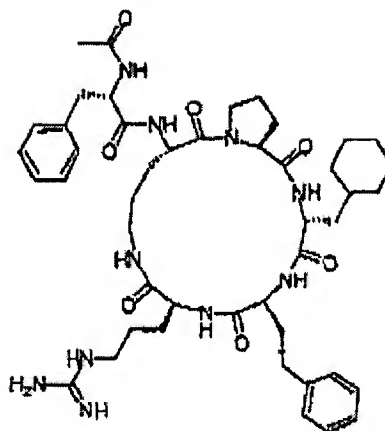
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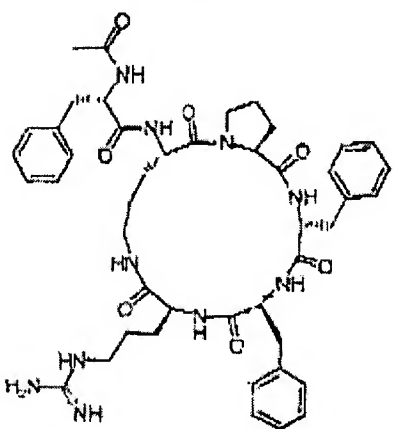
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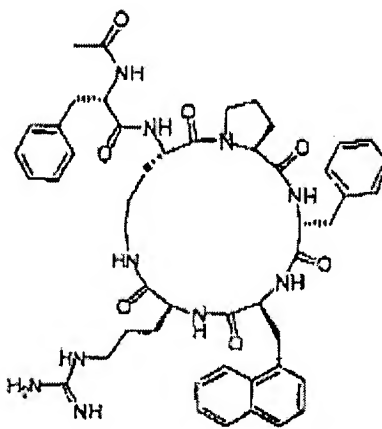
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61

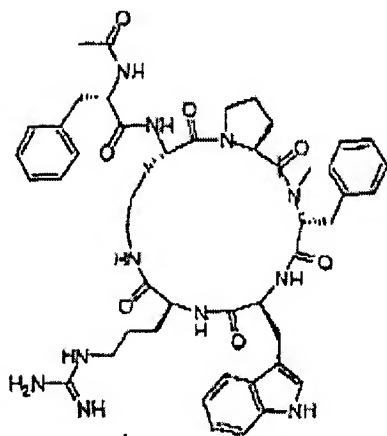


62



63

and



64

effective to treat or ameliorate the symptoms of said ulcerative colitis or Crohn's disease

in said mammal.